

Appl. No. : 09/990,613
Filed : November 21, 2001

provided in SEQ ID NO: 32, and is shown in FIG. 11. In another embodiment, the present invention provides a luciferase reporter construct driven by MUC5B sequences --1098 to +7, relative to the site of transcription initiation (*i.e.*, the MUC5B-b1 reporter construct). This promoter sequence is provided in SEQ ID NO: 31, and is shown in FIG. 10.--

REMARKS

All amendments to the Specification, including the replacement FIGURES, are to correct typographical and clerical errors. Amendment to FIGURES 10, 11 and 12 are to correct clerical errors in depiction of the termini of the nucleotide sequences. Evidence in support of these corrections is found in the Specification in TABLE 3 on page 67, which provides the correct termini positions for the nucleotide sequences provided in FIGS. 10, 11 and 12, in TABLE 2 on page 64, which provides the correct terminal nucleotide sequences in the PL1, PU2, PU1, PiL1 and PiU1 PCR primers, in FIGS. 6A-6H and 8, which together provide the complete MUC5B genomic sequence indicating the transcription start site (+1).

Amendment to the numbering of the views in FIGURES 6 and 11 are made in accordance with 37 C.F.R. § 1.84(u)(1), which requires that a single drawing consisting of multiple sheets be indicated by a number followed by a capital letter. In accordance with 37 C.F.R. § 1.121(d), marked-up copies of the originally filed drawings showing the proposed changes in FIGURES 6 and 10-12 are attached. Amendment to paragraphs **30** and **35** are made to reflect the corrected numbering of the FIGURE views.

Support for the amendment to paragraph **149** on page 46 is found in TABLE 3 on page 67, where the correct SEQ ID NOs are shown.

None of the amendments to the Specification, including the Drawings, constitute new matter.

SUMMARY

Applicants respectfully request entry of the above Amendment. Please charge any additional fees, including any fees for extension of time, or credit overpayment to Deposit Account No. 11-1410. A duplicate copy of this sheet is enclosed.

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Attached hereto at the APPENDIX is a marked-up version of the paragraph in the specification indicating the changes made to the paragraph by the current amendment. The attached APPENDIX is captioned "Version with markings to show changes made."

Respectfully submitted,

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APPENDIX I

Version with markings to show changes made

Deleted text is shown with strikethrough and added text is shown with underlining.

IN THE SPECIFICATION:

Paragraph number **30** on page 9 been amended as follows:

--[0030] ~~FIG. 6~~ FIGS. 6A-6H ~~shows~~ show 22,773 basepairs of human *MUC5B* genomic region isolated and sequenced from the Cos-1 genomic cosmid clone. This 22.7 kB encompasses 4169 basepairs of sequence upstream of the transcription start site, the 5'-UT and the 30 exons/introns upstream of the *MUC5B* large central exon.

Paragraph number **35** on page 10 been amended as follows:

--[0035] ~~FIG. 11~~ FIGS. 11A and 11B ~~shows~~ show the *MUC5B* genomic nucleotide sequence encompassing positions -4169 through +7 that were subcloned into the MUC5B-b2 luciferase reporter construct.--

Paragraph number **149** on page 46 been amended as follows:

--[0149] The present invention provides *MUC5B* reporter constructs suitable for use in drug screening protocols. In one preferred embodiment, the present invention provides a luciferase reporter construct driven by *MUC5B* sequences -4169 to +7, relative to the site of transcription initiation (*i.e.*, the MUC5B-b2 reporter construct). This promoter sequence is provided in SEQ ID NO: ~~32~~ 32, and is shown in FIG. 11. In another embodiment, the present invention provides a luciferase reporter construct driven by *MUC5B* sequences -1098 to +7, relative to the site of transcription initiation (*i.e.*, the MUC5B-b1 reporter construct). This promoter sequence is provided in SEQ ID NO: ~~31~~ 31, and is shown in FIG. 10.--

FIGURE 6A

1	ggtacccctg	gttgtgcoctg	togctcagtg	ggccagggtc	taagggctgt	gaagactcaa
61	catgcccaca	cctgctaact	ctgaacacca	ggcactggct	ctgagacccc	cgggcocttgc
121	tggacatctc	cccagggtgta	ctggggccagg	ggacaggggg	ctgggcatcc	caacaccccag
181	gagcaaggag	ccgctcaccct	gcccagggtcc	ccgaggcccg	gaacacccctc	ctgctggggcc
241	cacccagccc	tggacctgtc	cagcttgggtc	aacagatggg	acctcgggcc	catacagcagg
301	tgagccccc	ggagcgtggc	tctggcoctgg	taaggcoctcc	accccaggag	ttgggggggccc
361	cccgctgcag	ggagcaggag	gctgcctgagg	tggagggtcc	cacacagcta	ccactcccta
421	tccccagcac	agcctggggc	ctggctctga	gtacacatcc	tggggcoctgg	ctctgagcag
481	accaa-gagcc	catacctgct	ttgtgacccc	ctgggctgtg	cctgacaccc	cagggtgtcca
541	gcttggagct	ggggccccagc	tcagtgcctg	ggagctgatg	gaacctgggg	cccggtccag
601	tgcctggctg	ctgatggaca	ctggggcoctg	gctcaaacct	gcacctgtgt	ggtcggggga
661	ggggagggtt	gagccacgtg	gggaacccc	ccccagtgac	gactcttttgc	ggtggccaaag
721	ccctccagggt	gtcccccagg	gctgaggggg	tgggcttggg	gcagctgggtg	acagcagatg
781	gtggccctga	tcactgggtg	ctggacggcc	tctgaagggg	tctgtgggggt	cctggacggg
841	tccccattcca	tggcaggatt	aacccccctc	gggttctgtg	tggctccaggc	cggcccttttg
901	tctccactgc	cccttgggcca	gaatgagggg	cagtgaacca	cccagggtctg	ggcctgggtcc
961	agactccgtc	agagcccgag	ggcaaggtcc	tggcacgtcc	gaggtggggag	gctcctctg
1021	gctccaggag	gctgtgcoctg	gccccccctcc	ccggccaggaa	ccgggtgtgtg	ccctttccctt
1081	cccttatctt	ctgtcttcag	cgccttcaac	tgtgaagagg	tgaactcttc	aaacacgctg
1141	agcaaacagg	ccgactccc	agggccgcat	ccgggatgtc	ccaatagctg	tggccttgac
1201	gtccactctg	gaacccctgc	ccggacccc	ccaggtccc	aatgggcoct	ctggccgggg
1261	aggtgcctag	tgggagggac	gagggcaaa	tggggccccc	cacttgtttg	gtgtcactgt
1321	gtgcccaggg	ccactggcgg	gcgaggtctg	tccagggtgg	agggggggag	ggttggacca
1381	agggcaactga	cgggggacag	aggagctgcc	tgaggttccc	agctctgcca	tggagaaaaa
1441	gctatctctg	tgatgcagag	gtgcccggcc	cactcagagt	gggggtcagg	gggtgctcc
1501	ccagtggggc	gcccagcccc	atgaaggccg	cgggccccc	ccgtggctcag	ggaggccagg
1561	ggacaggcag	tggggggccag	cagggggagc	actaggcttg	gccccagcac	ccagggtgggc
1621	atcggtctgt	gagctggagg	cgggggcagg	gaggggggat	gtcacgaggg	cttgggtcaag
1681	gtggggagacc	tgggggggtg	cgtcgggggg	acgtctgcag	cagaggcoctg	ggcagcaggc
1741	acacccctcc	tgcacgtggc	aggaacggag	cggccacagg	gcccgttagcc	ccccatttgc
1801	ccagcctggc	ctggagcagg	caggaaggcc	ggggagagg	gtctgggtgg	ggcctgggtg
1861	cagtcacagc	cacgagcccc	gggggtgggg	ctctgggcca	cccttcagac	cactgctcaag
1921	gcccactggc	ccaggcatgc	ccgcccaccc	ttccacccgtg	ccgtgctgca	gcccgtctac
1981	cggcctggat	gtgaaagaga	gcttggagac	ccagagaccc	tccgaaacct	cagctttgga
2041	agtgaactcg	gtgggggtggg	tgggggggag	acaggtctctg	gagtcocgga	agtgagcggg
2101	gagctacgtc	gagatctggg	agacccctcg	ccccaccca	ggtacagggc	caggccagaag
2161	cccgagggtg	gcoctgagtt	aaagaaaacc	tcacaaaaga	caaaaggaga	aggcgggttc
2221	cagcctgcac	cacagccctc	gcgtctgag	gagccacctg	ggggcttcag	ccatgagggg
2281	tgacagggtg	caaaaacggg	cagctccgtt	cagctccgtg	tgcagctgtc	tcggccctcc
2341	cactctccaga	acgttctcc	attcccaagg	tgaacccctg	tcccatgcca	acacccagctc
2401	acacccctcc	ctgcacagcc	ctggggccca	ccgtccacac	tcctctctg	cgggttccat
2461	gactccaggg	gcagccacag	agtggccctc	ctggcctttg	tcctctgtgt	ccacctgcoct
2521	cactctgcac	agtgtcccca	gcttccccc	tggagcagcc	tgggcccagcc	ctccttttcc
2581	acggctgaac	cgtattccac	cgcacgggac	agcctccaga	tgttgaccca	gtcctccggc
2641	cagggacaca	tgggcagctt	ctgccccttg	tcagtjatgc	tgtgtgggac	atgggtgtgc
2701	aaatgtccct	caggaccccg	cttcagttct	tctggggaca	gacccagagt	ggagttgctg
2761	gtcaccccca	ccagcagggc	acagggtccc	gggtccccc	gtctctgcca	acacttcccta
2821	cttccctgtgt	ttcttgatcc	ccgcccctcc	attgagcgtg	agacagggtca	gaagctttga
2881	agatgggctt	tgtcttgtc	ccagaaaacc	ccctctcaag	aattttaact	cagaaagaca
2941	aacggggggg	agctgggtga	gggcccgtga	ccgggagctgt	gaogtaataa	aaacacagca
3001	cttgganacc	acccatagggt	ccccatgggg	ccggacagagg	ccacacccac	cgacctgggtg
3061	ccttcctgct	ggcgtctgct	ccacggagca	ttccaggacc	tgggtgaccag	ggagccaggga
3121	ggtggggagca	tctgaggtgc	aggtccacac	ggcaggagggt	gtttgcacaga	ggtattgcag

FIGURE 6B

3191	ogoggacgga	gtgtcctgca	gatgaacgtg	tctgtcctgt	agatgaacgt	cgtaaggag
3241	gtttaccaca	tagcccccgg	gaagccccc	caacaccagc	cggaggtgct	aggtctctgc
3301	ggctccccc	tggggcaggg	ggaggacccc	gggcaggtcc	aggacccccc	ggagcagctg
3361	cttctccaac	cctggccaggg	ttaatgagga	ggcccagag	tgaggtggag	gcacaaatggg
3421	actcagggcc	ggagcctctg	gcctggctgg	atcagggctg	gcattggaca	agcgcagctg
3481	actcccgatg	tgcctggcca	ggagacactc	tgggcctcag	tttcccttgg	aatgtgaacc
3541	ttgaaaacaga	tcagcccaga	gacctccccc	ggtcttccag	gggtctctgt	cagctgggct
3601	gggtctctct	gaaatagagc	ctcctccagg	gaccccccac	agccaccacc	actgagcacc
3661	ctggccatgt	gcctgcctga	gcctcagcag	agcctgcagg	gcctcccgctg	ggctaaagcag
3721	tggctgggagg	ggagctccag	cctcgtgggc	cctgcaccgg	cctcggggac	ccatggctcag
3781	tggctggggg	tgcctggccag	aggctgggat	tcctctccag	caggagccgc	agtggggctg
3841	agtgtgaggc	aggctgggct	accactgttt	ccatggaccc	tgcctccaa	gcagccctg
3901	ccttccagcg	gcttggccat	ctaggacggg	tgcaggttgg	ggtaggccct	tctctccctt
3961	cagattctca	gaagctgctg	gggtgggggg	cgtcttgggc	ctcagggcac	agagctgcac
4021	atccttccct	atccaggcct	ctccctcgcc	acagccctcc	cccgagagca	aacacacgtg
4081	gctgggagcg	ggaagagcac	ggtgcctctg	gtggcctggg	ctgggttggg	gcacaggctc
4141	cctgctacat	aagctggggc	ccccagggga	gcacgcaccc	ggcccggtct	cctccctgcc
4201	cgtcccccgt	ccccccaccg	tgcacgcccc	caggatgggt	gccccgagcg	cgtgcgggac
4261	gctgggtgtt	gctctgggcg	ccatgctcgt	ggtgcgcag	gcaggtaaag	gccccccact
4321	cggcccccct	tcgatgctgt	cttcacggcg	gggtctctct	caggtcgtct	gcctgggagc
4381	ctctccctca	gagtgccagg	gcagatcccc	ctacgactcc	ctgagtgctc	tggatgggac
4441	cctacccgtc	ccccaccacg	ggtcttgggg	ccccacgggc	tcacagtgtc	agcaaacctc
4501	ggggctgggt	tggatggggt	gtccaggaga	aggctgggccc	ctgacgtcag	ggcaaggccc
4561	ctggggagac	accgaaagg	tcttggctct	gggggtggga	caggagtggg	caatggggga
4621	gggggtccac	gctgggggtc	tctctgggag	cccatgaggg	ccaggccatc	gagtgagcag
4681	gggcaggctt	agcgtggacc	cctgtccagg	acgggtctca	cccttccagc	cctccctggg
4741	gatcacagct	ggcagggcag	gtgagggta	ccgggacccc	caagggtctg	acagccagcc
4801	gcacagagcc	cgccctccac	ccacgctcga	ctccccacgg	ccatctgttg	gcctctcctg
4861	cggcacgggc	tgcctgggtc	tcagccgagc	gttttccctc	gtctgctgtc	tcttggccag
4921	agccgcagca	ttaatactta	ctgtcaatag	agaaagatgc	agcccccagg	gcacccggga
4981	gacacccagc	caggctggcc	atgaggctgc	tgcagccccc	ccctgccccg	ccctccggcc
5041	cctccccaag	ttgggggtct	ggctgggcag	gtgaggtccc	ctgggggtct	tctccatctg
5101	tggaaaggag	gctgggtggt	cagccagggc	ggagccaggg	ggcttccccc	agtggctccc
5161	agcctgggcc	cgggggggag	tgcgtctggc	tgcacggctt	gggggtctgt	ttgaccagaa
5221	cagccacctc	cttgcctctg	attctctcgg	gcactgcagc	cttggctccc	ctcactctgag
5281	tgggcagggc	ctagggaact	tcagccccc	ggtcctccct	tcctccacgc	tcctcccaagt
5341	tggggagatc	aagcccttgg	cagggaactgt	gctttagtca	ccagatgcac	gtctgtgtgc
5401	cgggggaagg	agccctgcac	agagcagctc	catgttaggg	gacacacccc	aaagtgatgg
5461	ggtgggtggt	ggtgggcact	tctctggcta	caagatggag	gcccaggtgg	tcacgcccac
5521	ggagggcact	gcacggagca	gataacccag	ggcagtccag	ctgggcaggg	gaggggtctg
5581	ctggggggga	gggggtgccc	gggttgggga	ggggctgtct	ggggcagggg	aggagctggc
5641	tggggcgggg	gaggggtctg	agggcacagg	aggggctgcc	tggggctggg	gaggggtctg
5701	tgggggtggg	aggggtgccc	tgcggcgggc	gcgggggtgt	gggagtggct	ggttgggtctg
5761	gcacacaggg	gcagggctgt	gagctgtggg	tgggggtgga	ggactcaggg	atcggctggc
5821	cttctgggaa	aggcagtcac	cctggatctc	tggaggcggc	ccctgtgggt	gttccagatg
5881	gtcagcagga	cctgggtgga	aaagccaggc	agggccaggc	cagagtggga	accacagggc
5941	cggcccccct	ctgagccctg	accatgcttg	tgggggtctg	ggcctccact	ccccccctcc
6001	ccacacacag	ctcagatcag	gataccaggc	ggagctctgg	ggtcctgtga	agggggcgcc
6061	ccacacacaa	ctgggcagag	aatggccggg	ggtcctcaga	gtcctgtggg	ttggagctgc
6121	ctcctccacg	ctcccatggg	gttgggtggg	caggccctgc	ccggaggggg	tggtagcctc
6181	gggggacctt	ggggcgccat	cccagtatca	acggccacac	agcttggggg	gcacagagtc
6241	ctgccccag	cctgccccac	tgcctctgac	ttaggatcta	gttcgaaaat	ggttctgtgt
6301	ttaggtttct	gctaagtcac	gcctggaagg	ctccaaagtgt	gtcctcccaa	caagctgtgt

FIGURE 6C

6361	otttgttcoot	otccaaggga	tgtgtgggat	ggggcgaaat	cccccttgg	gggggcaaac
6411	goottttcoot	gattccattt	tctcccccat	cccttgagaa	ggaggcaaca	tccccgootg
6461	tcagtcgggg	acagggcagg	ccgtgctggg	ggagctcag	ggctccctgc	tggaggttct
6511	cattccggcag	gctttccata	gcattgagca	ggagcggagg	cattctgggc	tgaagggttg
6561	gggggootga	ggggctgggg	aggagtcccg	gccttggcca	cagtgtgtcg	tgggggtgaa
6611	cccgagggc	atggagaccc	ccaccaagga	ccccacatgc	ggctgcccga	ccaggcatgt
6711	ggccaggctc	gtgggtgggt	ccgtggctgg	cagccacatc	tagttccctc	ctgaactcca
6761	ctccctcttc	ccacagagac	ccagggcctc	gtggagccga	gtggggggaa	tgcagggcac
6811	acbatggatg	gcggtatgtg	gccaggctcg	gggggggggg	gttcccgacc	aggctggagg
6861	ggctggaatt	ggggctgggg	caggcagacg	ccctcccaag	cagccatggg	tctgacagag
6911	acccctccctg	ggctccctgc	ccaggacaat	acccagccac	cgaggcggag	cttgggtgtc
7011	caaagaagag	gaaagtgcag	agcagagaga	cattgcacaca	gaagcacacg	cgtggacagg
7061	cacatggctg	cccacactta	cactggccaa	cacatgtgtg	cacacacagg	ccaaaaacaa
7111	agggcagcag	tgtttgtggg	gcagacaggg	ccaagggtta	aggggtgtgc	ttggccccag
7211	cccatcagtc	ttgggtctcc	ctccaactct	gggtggctgg	gaggagggtg	ggccccgggg
7261	aggggtgtct	tgtttccctc	ccctggccac	gttccctggg	tgaaccagct	tcaaccacag
7311	gtgcccogac	gtccctggcc	acccggcgcg	tgaactttgt	tccacccgtc	actgtcttcc
7361	ccagcctgag	ccgttaagcag	atgctgcccc	tgcacgcccc	gaagggggtg	tttggccagt
7411	ccaaaagggtg	ggggcccagat	ctagggggtgc	agctgcacac	aggtggggcc	gttggggcag
7461	acccagagtc	ctccgtgtgg	gggtctctcc	gtccactggc	cccccggggg	gatcgggacg
7511	ggctcaggggt	cttggagcaa	aacagaccca	gtccaggggtg	agccaggccag	ggccagccca
7561	gcagccgacc	atgggtcttt	ccattccaaa	aaaccagggtg	ccctggccca	ggggaggtta
7611	ccccgtgggg	ggctggccatg	gggatggggc	ccatcccgcg	ctccccacag	ccctgaaacc
7661	gggcacaaat	gggggggtgt	gcagcccttg	gggtgacttc	cactacaaag	ccctcgacgg
7711	cgaactcttc	cgcttccctg	gcctttgcac	ctacgtgttc	tctgagcaat	ggcgcccgcc
7761	ctacaggagc	ttcaacgtcc	agctacggcg	aggcctagtg	ggctccaggc	ctgtgttcac
7811	ccgtgttctc	atcaaggccc	aggggtgtgt	gttgaaggcg	tccaaaggct	ccgtctccat
7861	caatgggcag	cggtgagccg	gcacccctgg	ggaggggcga	gggcggggcc	acacagtgtg
7911	accccccac	acggccatgt	ctgacctggg	ccagggtgtg	gggtgggttg	gggtggccag
8011	cagccaggag	agcgggggcc	agggagagac	cccgctgtct	ggccaggggg	gagctgoott
8111	acagccgcac	tggcctccctg	gtggagccga	ggggggacta	cattcaaggct	agcatccggc
8211	tgggtgctgac	attccctgtg	aacggagagg	acagtgcctc	ggcgagggaag	ccccctcgcc
8261	ccctgccccct	tcaggcctgg	ccacaaaaac	ccacccgggg	gtcgagggat	gootccctgg
8311	gcttgggggtc	acggggcttg	gggcattgtg	ccagtggggg	gatcagaggct	ccctgaggctg
8411	gagctgcccc	tccccactct	cagctggagc	tggatcccaa	atacgcacaa	cagacctgtg
8461	gcctgtgtgg	ggacttcaac	ggcctcccg	ccctcaacga	gttctatgoc	ccagtgcagt
8511	gcccactggg	tgagggggcg	gtgaccaatt	atgtccggcca	acgaagagcc	acagtccggg
8561	ggaggccggg	agggggcgga	gtggggaccc	ggcacccagg	agggaggggc	ccagaggact
8611	gtgcccacaa	tgggtgggagg	agtgcocctc	gggggtgttg	ggccctaggc	aggagtggga
8711	gtccctctggc	ctgggtccag	gaagtgggag	cccatatctt	gtccccaggc	gccccccaga
8761	gcccacacac	ccctgttttc	ttccccgacg	acgccaggct	gaccccgctc	cagttttggg
8811	acctgcagaa	gttggatggg	cccacagagc	agtgcocggc	cccgctgccc	ttgcccggcg
8861	gcaactgcac	ggacgaggtg	agtcccccg	cccccacagg	tccctgggcag	ggacggccct
8911	caggtccagg	gggagctggg	ccgaggtctg	aggaatgttc	ccagctgggtg	gagagatggg
8961	gocattggag	ggaggccggg	cagccacccct	ctgtgtgtct	agttccacgg	tacacactgt
9011	ccgagtgctg	tgaactggct	gttccatcagg	ccacggctgt	gcccattctgt	gtgagcaaac
9111	acaggcccat	gttgcacagg	ctgggtctgag	ggtgggcact	ggggaagccc	ggagccagcc
9161	cttccacaca	gcaggtggac	tcagaagggg	ccctggaggct	ccaggatccc	caaacccagc
9211	ggatctctga	gccttaaaat	gtgctgtgaa	tgaacagcat	agccccctgt	tgagctgggg
9311	cccgagcccg	gcagccctgg	gcctggggga	ggaggaacac	cagcaactgga	ctgcccggaa
9361	ccctgcccggc	tgcacagaga	ggcgggggct	ccacctcccc	tccctggctc	ccctccctgg
9411	gggtgggggtc	tgcaccttct	ttggggcctt	actccacggg	caggccacatc	ccgagtaggg

FIGURE 6D

9481	gatcccggggt	tgaacgggtca	ctcccccaagg	gccaagcaga	gctctgcatg	gccaacagtgg
9541	gtggaagggg	tggggctggg	tacaaggaaac	cccgacaggg	agagggcttc	ccggcctggc
9601	ctgcatggg	tctattcca	gcacogtggc	agcccccacg	gatggcaggg	gtgcccagcc
9661	tggcccactg	tgcctcccag	gagggcatct	gccaacgcac	cttgcgggg	ccggccttgg
9721	cgagtgcca	cgcactgggtg	gacagcaactg	cgtaacctggc	cgccctggccc	caggacctgt
9781	gcgctggcc	caactggccg	tgtgcaacct	tgtgggaata	ctcacgccaag	tgggcccacg
9841	cggggggcca	gcggcggaac	tggaggtggc	ctgagctctg	ccgtgagtgc	tcccagggcc
9901	tcggccaggg	attgtgcca	agagaagggg	cagggggagc	gccttggggg	ccactggggg
9961	tggggaggcc	tgggggacag	gggtggaggg	cagaggaccc	accccaggca	tagtgggacg
10021	aggccacccc	aggaccccag	gaggggggtg	ggccgcccgg	ggctgcaggg	gaaggagagg
10081	cttctgggga	ggcttctgca	gcaggtggca	ggggctgggg	ctggaggggt	tagctgccc
10141	cgatgagggg	cgccagggcc	acccctggggc	ctagctctgg	cttctgtgga	cttgatggca
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FIGURE 6E

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18721	tgtctgcaat	cccagcactt	tgggaocgtg	aggcaggtgg	atcacctgag	gtcaggagtt
18781	tgagacccag	ctggtcaaca	tggcgaaaac	cgtctctctc	aaaaaataca	aaaatagccc

FIGURE 6G

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FIGURE 6H

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21781	ctgcccaggc	ccagtccttc	atgcagaaa	ggctctaacc	aaggctgagg	caggcactgg
21841	ggtcccccgt	atcccacagg	ggcagggcca	gccttgggga	aagggtcctc	tggggcccc
21901	ccaccttggt	aggccaggac	tgagggatgc	tgagccagga	cccccttccc	atgccccctg
21961	caggcccggc	cctcccggtc	tcccacgtgt	gtgtcccgga	ggtctgcggc	tggtccagct
22021	ggtacaaatg	gcacccgcca	gagcccggtc	tgggaggcgg	agactctgag	acgtttgaaa
22081	acctgaggca	gagagggtac	caggtatgcc	ctgtgctggc	tgacatcgag	tgccgggggg
22141	cgcagcttcc	cgcacatgcg	ctggaggagc	tgggccagca	gggtggaact	gacccgatgc
22201	gggggctgat	gtgcgcacac	agccaacaga	gtcccccgct	ctgtcccgac	taagagctgc
22261	gggtttctct	ctgcgaatac	gtgcctctgt	gccccctccc	ggccccaggc	accagccctc
22321	agccctccct	cagtgcacag	acggagcctg	ctgtgcctac	ccccacccag	accacagcaa
22381	ccgaaaagac	ccacctatgg	gtgaccccca	gcacccggtc	gacggggggc	ctcacctcgc
22441	agaatgggtc	cagctcaggc	cccgtagcgg	tcaccccttc	ggccccaggc	accaccacct
22501	gcacgccccg	gtgtcagttg	acagagtggc	ttgatgagga	ctaccccacg	cttgaaacac
22561	ctggaggggg	cgttgagtcc	taagataaga	tcaggggccc	tgaggggcac	ctatgcacgc
22621	agcctaagga	catagagtgc	caggccgaga	gcttccccaa	ctggacccct	gcacaggtgg
22681	ggcagaaggt	gcactgtgac	gtccacttcg	gcctgggtgt	cagggaactg	gagcaggagg
22741	ggtcttccaa	gatgtgctac	aactacagga	tcc		

FIGURE 10

```

(-1098)  ggg  ccacgggagca  ttcagggaagg  tggtagaccag  ggagccagga
ggtagggagca  tctgaggttgc  aggtcacacag  ggcaggaggt  gtttgcaaga  ggtattgcag
cgaggacgga  gtgtcctgca  gatgaagctg  tctgtcctgt  agatgaagct  cgtcaaggag
gtttaccaca  tagcccccgg  gaagccccc  caacaccaga  cggaggttgt  aggtctctgc
ggctccccc  tggggcaggc  ggaggacccc  gggcagggtcc  aggaaccccc  ggagcagctg
cttctccaac  cctgcccagg  ttaattgagg  ggccccagag  tgaggtggag  gcccattggg
actcagggcc  ggagcctctg  gcttggtctg  atcagggctg  gcattggaca  agcgcagctg
actcccgatg  tgcattggcca  ggagacactc  tgggcctcag  tttccctctg  aatgtgaacc
ttgaaaacaga  tcagcccaga  gacctccac  ggtcttcaag  gggctctggg  cagctgggct
ggggtctctg  gaaatagagc  ctctccagg  gaccccccaca  agccacccag  actgagcctc
ctggccatgt  gcattgcctga  gctcagcagg  agcctgccc  gctcccccgt  ggttaagcag
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agtgtgaggc  aggtgggtg  accactgttt  ccattggaacc  tgggtccaag  gccagccctg
ccttcacagc  gctttgcct  ctaggacggg  tggcagggtg  ggtaggccct  tctctccctt
ccgattctca  gaagctgctg  ggggtggggg  cgtcctgggc  ctccgggcac  agagctgcaa
atccttctct  atccaggcct  ctccctctgc  acagccctc  cccgagagca  aacacacgtg
gctggagcgg  ggaagagcac  ggtgcccctg  gtggcctggc  ctggcttggg  gccaaaggctc
cctgctacat  aagctggggc  cccaggggg  gcaagcacc  gg  (+7)

```

FIGURE 11A

```
(-4169)  cctg gttgtgcoctg tgcctcagtg ggccagggtc taagggtctg gaagaactcaa
catgccccca cctgctactt ctgaacacca ggcaactggct ctgagacccc cgggctcttg
tggacatctc cccaggtgta ctgggcbagg ggacaggggg ctggccatcc caacacccag
gagcaagcag cccgtcactt gcccaggtcc ccgaggcccg gaacaccttc ctgctggggc
caccagccc tggacctgtc ccgcttggtc acacgatggg accctcgggc catcaggcag
tgagccccc ggagcgtgog totggcctgg taaggcctcc accccaggag ttgggggggc
cccgtgccc ggagcaggag gctgcccagg tggagggtcc cacacagcta ccactcccta
tccccagcac agcctggggg ctggctctga gtacacatcc tgggjcctgg ctctgagcag
accaagagcc catcctctgt ttgtgacccc ctgggtctgt cctgacccc caggtgtcca
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tgcttgggtg ctgatggaca ctggggcctg gctcaaacct gbaocgggt ggctggggga
ggggagggt gagccacgt gggaaacccg cccagtgac gactctttg gctggccaa
ccctccaggt gtccccccag gctgagggg tgggcttggg gcagctggg acagcagatg
gtggccctga tcactgggtc ctggacggcc totgaagggg totgtgggg ctctggaagg
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tctccactgc cccctgggca gaatgagggg cagtgaacca cccagggtcg ggctgggtc
agactccgtc agagcccgag ggcaagttcc tggcacgtcc gagggtggag gctcctctgc
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agcaaacagg cccgaactcc agggcccgat ccgggatgtc tcaatagctg tggccttgac
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aggtgcttag tgggagggag gagggcaaa tggggccccc cacttgcttg gtgcaactgt
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gctatctcgc tgatgcagag gtgcccggcc cactcagact ggggtgaggg gggctgctcc
ccagtgggcc gccaagccccc atgaaggccg cgggacccgg ccgtggctcag ggaggccagg
ggacaggcag tgggggcccag caggggagac actaggcttg gcccacgccc cccaggtggg
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ccagcctggc ctggagcagg caggaaagg ggggagaggg gtctggctgg ggctgggtg
cagtcacagc cccagcacca ggggtgggga ctctggccca ccttcagac catgctcaag
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tgacagggtg caaaaagggc cagctccgtt cagctcgtg tgcagctgtc tccggccctc
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agatgggctc tgcctctgtc ccagaaatcc cactcttaag aatttaact cagaaagaca
aacgccccgg agctgggtga gggcccgtga cggggactgt gacgtaaata aaacaacaga
cctgjacacc accctagggt ccccatgggg ccggacgagg ccacacccac cgaactgggtg
```

FIGURE 11B

cttcctgoot	ggcgtctgog	ccacggagca	ttcaggacgc	tggtgaccag	ggagccagga
ggtgggagca	tctgaggtgc	aggtcacacg	ggcaggaggt	gtttgcaaga	ggtattgacg
cgggacgga	gtgtcctgca	gatgacgctg	tctgtcctgt	agatgacgct	cgtcaaggag
gtttaccaca	tagcccccgg	gaagccaccc	caacaccagc	cggaggtgct	aggcttctgc
ggctccacac	tgggggcaggg	ggaggacccc	gggcaggctcc	aggacccccc	ggagccagctg
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atccttctctg	atccaggcct	ctccctctgc	acagccctcc	cccgagagca	aacacaogtg
gotggagcgg	ggaagagcac	ggtgcccctgc	gtggcctggc	ctggcttggg	gccaaggctc
cctgctacat	aagctggggc	ccccaggggg	gcaagcacc	gg	(+7)

FIGURE 12

```

(-13)  ccagggga  gcaagcacc  ggcccggctc  cctccctgcc
cgcccccgtc  cccccacccg  tgcacagccc  caggatgggt  gcccagagcg  cgtgcccggac
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accatggatg  ggggtatgtg  gccaggctcg  ggggtgggg  gttccctgac  aggtggagg
ggctggaatt  tgg  (+2738)

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marked-up copy

FIGURE 6 A

```
1 ggtacccctg gttgtgcttg tgggtcagtg ggcacgggtc taaggggtgt gaagactcaa
61 catgccccca cctgctactt ctgaacacca ggcactgggt ctgagacccc cgggctttgc
121 tggacatctc cccaggtgta ctg jgcacgg ggcacgggtc ctggccatcc caaaccccag
181 gagcaagcag cccgtcacct gccaggttcc ccgagggccc gaacaccttc ctggtgggct
241 cccccagccc tggacctgtc ccgcttgggt acacgatggg accctcggcc catcaggcag
301 tggacccccca ggagcgtggg tct jgcctgg taaggcttcc accccaggag ttgggggggc
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421 tccccagcac agcctggggc ctggctctga gtacacatcc tggggcttgg ctctgagcag
481 accaagagcc catccctgct ttgtgaaccc ctgggtgtgt cctgacaccc caggtgttca
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601 tgcctgggtg ctgatggaca ctggggcctg gctcaaacct gcacccgtgt ggtcggggga
661 ggggagggct gagccacgtg gggaaacccg cccagtgac gactctttgc jgtggccaa
721 cccctcaggt gtccccacgg gct jaggggc tgggcttggg gcagctgggt acaggagatg
781 gtggccctga tcactgggtc ctggacgggc tctgaagggg tctgggggtc cctggacggg
841 tccccattca tggcaggatt aacccccctc ggggtctgtg tggctcaggg ccgccccctt
901 tctccactgc cccctggcca gaatgagggg cagtgaacca cccagggctg jgcttggctc
961 agaactccgtc agagcccgag ggcaagttcc tggcacgtcc gaggtgggag gctcctctgc
1021 gctccaggag gctgtgctg gccccccctc ccggcaggaa ccgggtgtgt ccccttccct
1081 ccttttatct ctgttttcag cgccttcaac tgtgaaggag tgaactcttc aaacacgtg
1141 ajcaaacagg cccgaactcc agggcccgat ccgggatgtc tcaatagctg tggccttgac
1201 gtccactctg gacccctgcc ccggacccag cccagtcccc aatggggcct ctggccgggg
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1321 gtgcacaggg ccactggcgg ggcaggtctg tccaggttgg aggggggag ggttggacca
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3181 ccgggaacga gtgtcctgca gatgaactgt tctgtcctgt agatgacgt cgtcaaggag
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FIGURE 11

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English - 11

collective experience
products

FIGURE 10

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FIGURE 11 A

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FIGURE 12

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